

CLAIMS

We claim:

1. A control device that controls a fuel cell system to operate intermittently by
5 switching between the generation state and the generation stop state of a fuel cell,
wherein it is determined whether to stop the generation operation during intermittent
operation based on at least the temperature of a specific component that contains
moisture, from among the components constituting the fuel cell system.

2. The control device according to claim 1, wherein the specific component is at
10 least one of a valve, a passage, and a humidifier arranged on a flow path for a fuel
gas or oxidizing gas.

3. The control device according to claim 1 or 2, wherein the temperature of the
specific component is measured directly by a temperature sensor provided
corresponding to the specific component.

15 4. The control device according to claim 1 or 2, wherein the temperature of the
specific component is measured indirectly based on at least one of either the
operating state of the fuel cell system or the external air temperature.

5. The control device according to any one of claims 1 through 4, wherein in
determining whether to stop or not, when it is determined to not stop, the generation
20 state of the fuel cell system is controlled so that the measured temperature exceeds
a threshold value.

6. A fuel cell system having a control device that controls the fuel cell system to
operate intermittently by switching between the generation state and the generation
stop state of a fuel cell, the fuel cell system comprising:

25 means for determining the risk of freezing of a specific component that
contains moisture from among the components constituting the fuel cell system; and

control means that forbids intermittent operation when it is determined that the risk of freezing is high.

7. A fuel cell system comprising,

5 a fuel cell which serves as an electrical power supply source to a consumption device which consumes electrical power;

an electricity storage device that stores electrical power generated by the fuel cell, which serves as an electrical power supply source to a consumption device which consumes electrical power;

the control device according to any of claims 1 through 5;

10 wherein the fuel cell system operates intermittently by switching between the generation state and the generation stop state of the fuel cell.

8. A fuel cell hybrid vehicle comprising the fuel cell system according to claim 7.